

IN THE CLAIMS:

The text of all pending claims (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. When strikethrough cannot easily be perceived, or when five or fewer characters are deleted, [[double brackets]] are used to show the deletion. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 4, 6, 7 and 8 in accordance with the following:

1. (Currently amended) A system, ~~relaying apparatus for use in a network system,~~
~~the network system including a plurality of client terminals and server terminals providing~~
~~services to those client terminals via a network, the relaying apparatus comprising:~~

a plurality of client terminals and server terminals providing services to the client
terminals via a network;

a plurality of route load measuring units each provided in, or in ~~the~~ a vicinity of, each of said server terminals and each measuring a respective load in a TCP or UDP delivery route from the route load measuring unit to one client terminal having issued a request for service out of said client terminals; and

a relaying apparatus, comprising:

a selecting unit which selects a route load measuring unit out of the plurality of route load measuring units as a primary destination of the request for service and the route load measuring unit selects one server terminal out of said server terminals as a secondary destination of the request for service from said one client terminal based on the load measured by said route load measuring units, wherein each of said route load measuring units monitors operating states of respective server terminal and when a request for service is received from said one client terminal, said selecting unit selects one server terminal out of said server terminals as the secondary destination of the request for service from said one client terminal based on the load and the operating states monitored by said load measuring units, wherein operating states include idle and active states; and

a storing unit which stores the load measured at a pre-specified time interval by each of said route load measuring units,

wherein when a request for service is received from said one client terminal, said selecting unit selects said one server terminal out of said server terminals as a destination of the request for service from said one client terminal based on the load stored in the storing unit, and

wherein said route load measuring units each measures, as the load, an effective bandwidth of the route based on a plurality of parameters, wherein the parameters include

a round-trip time,
a maximum segment size, and
an adjustable congestion-evading congestion window size for a server terminal utilizing TCP.

2. (Cancelled)

3. (Cancelled)

4. (Currently amended) ~~A system, relaying apparatus for use in a network system, the network system including a plurality of client terminals and server terminals that are divided into several groups each having at least two of the server terminals and that provide services to those client terminals via a network, the relaying apparatus comprising:~~

a plurality of client terminals and server terminals that are divided into several groups each having at least two of the server terminals and that provide services to the client terminals via a network;

a plurality of route load measuring units in, or in ~~the~~ a vicinity of, each of said server terminals, each provided with respect to each of the groups and each measuring a respective load in a TCP or UDP delivery route from the route load measuring unit to one client terminal having issued a request for service out of said client terminals; and

a relaying apparatus, comprising:

a selecting unit which selects one route load measuring unit out of said route load measuring units as a primary destination of the request for service from said one client terminal based on the load measured by said route load measuring units,

said one route load measuring unit selects one server terminal out of the server terminals in the group as a secondary destination of the request for service from said one client terminal, wherein each said route load measuring unit monitors operating states of the respective server terminals in the group, and said one route load measuring unit selects one server terminal out of the server terminals in the group based on the operating states when selecting the secondary destination, and

said route load measuring units each measure, as the load, an effective bandwidth of the route, the effective bandwidth estimated based on a plurality of parameters, wherein the parameters include:

a round-trip time,
a maximum segment size; and
an adjustable congestion-evading congestion window size for a server terminal utilizing

TCP.

5. (Cancelled)

6. (Currently amended) ~~A system, relaying apparatus for use in a network system, the network system including a plurality of client terminals and server terminals that are divided into several groups each having at least two of the server terminals and that provide services to those client terminals via a network, the relaying apparatus comprising:~~

a plurality of client terminals and server terminals that are divided into several groups each having at least two of the server terminals and that provide services to the client terminals via a network;

a plurality of route load measuring units in, or in ~~the~~ a vicinity of, each of said server terminals, each provided with respect to each of the groups, each measuring a respective load, in a TCP or UDP delivery route from the route load measuring unit to one client terminal having issued a request for service out of said client terminals and monitoring operating states of said server terminals in each group; and

a relaying apparatus, comprising:

a selecting unit which selects one route load measuring unit out of said route load measuring units as a primary destination of the request for service from said one client terminal based on the load measured and the operating states monitored by said route load measuring units where operating states include idle and active states, wherein

said one route load measuring unit selects based on the operating states one server terminal out of the several server terminals in the group as a secondary destination of the request for service from said one client terminal, wherein operating states include idle and active states, and

said route load measuring units each measure, as the load, an effective bandwidth of the route, the effective bandwidth estimated based on a plurality of parameters, wherein the parameters include:

a round-trip time,

a maximum segment size, and

an adjustable congestion-evading congestion window size for a server terminal utilizing

TCP.

7. (Currently amended) ~~A system, relaying apparatus for use in a network system, which network system is formed with a plurality of client terminals and server terminals providing services to the client terminals via a network, comprising:~~

a plurality of client terminals and server terminals providing services to the client terminals via a network; and

a relaying apparatus, comprising

a plurality of path load measuring and operating state monitoring devices in, or in the vicinity of, each of said server terminals, arranged:

to measure effective bandwidths of TCP or UDP delivery path loads from a client terminal requesting service to server terminals wherein the effective bandwidth is based on a plurality of parameters and wherein the parameters include:

a round-trip time,

a maximum segment size, and

an adjustable congestion-evading congestion window size for a server terminal utilizing TCP,

and

to monitor operating states of server terminals wherein the operating states include idle and active states; and

a DNS-responding device to compare effective bandwidths of measurements of path loads from the plurality of path load measuring and operating state monitoring devices to the client terminal and to select a server terminal having a largest effective bandwidth and an active operating state to provide service to the client terminal.

8. (Currently amended) A system, ~~relaying apparatus for use in a network system, which network system is formed with a plurality of client terminals and server terminals providing services to the client terminals via a network~~, comprising:

a plurality of client terminals and server terminals providing services to the client terminals via a network; and

a relaying apparatus, comprising:

a plurality of path load measuring and operating state monitoring devices in, or in ~~the a~~ vicinity of, each of said server terminals, arranged:

to measure, as loads in TCP or UDP delivery paths from a client terminal requesting service to server terminals, effective bandwidths of the paths wherein the effective bandwidth is based on a plurality of parameters and wherein the parameters include:

a round-trip time,

a maximum segment size, and

an adjustable congestion-evading congestion window size for a server terminal utilizing TCP,

and

to monitor operating states of server terminals wherein the operating states include idle and active states; and

a DNS-responding device to compare the effective bandwidths measured by the path load measuring and operating state monitoring devices and to select a server terminal having a largest effective bandwidth and an active operating state to provide service to the client terminal.